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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,798	02/28/2002	Mamoru Shoji	2002-0295A	3904

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,798

Applicant(s)

SHOJI ET AL.

Examiner

Michael V Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 9-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 3, 7 and 8 are objected to because of the following informalities.
- a. On line 6 of claim 3, replacing "the" with -an- is suggested to avoid improper antecedent basis issues for the limitation "~~the~~ address area in the second data recording layer".
 - b. On line 7 of claims 7 and 8, replacing "an address area" with -address areas-- is suggested to avoid improper antecedent basis issues for the limitation "the address areas" on line 7 below.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al (hereafter Ito) (US 5,627,816).

Ito discloses an optical disc comprising at least first (Fig. 1, element 10b) and second (Fig. 1, element 10a) data recording layers with at least the first data recording layer being optically recordable (Col. 3, lines 33-36 and Col. 6, lines 21-22), wherein variation in diffraction efficiency of a light beam incident to the first data recording layer, when reading the second data recording layer, is within a specific range within the first data recording layer (Col. 4, lines 16-21 and 31-60 and Col. 14, lines 7-11). The limitation "within a

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specific range” reads on any “range within the first data recording layer” that satisfies the limitation “variation in diffraction efficiency of a light beam incident to the first data recording layer, when reading the second data recording layer”.

7. Claims 2-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiyama et al (hereafter Sugiyama) (US 5,414,451).

In regard to claim 2, Sugiyama discloses an optical disc (Fig. 5, element 4) comprising at least first (Fig. 5, first layer (layer closest to layer 1) of layers 1 to n that is not a ROM layer) and second (Fig. 5, element n) data recording layers with at least the first data recording layer being optically recordable (Col. 20, line 32 and Col. 24, line 67), wherein: the first data recording layer comprises a data area (Fig. 5, DATA AREA) and an address area (Fig. 5, PREFORMAT AREA) for identifying a location in the data area (Col. 20, lines 28-31), the address area contains a pit and land sequence (Col. 28, line 66-Col. 29, line 2), and a groove (Fig. 20, element 39) or a pit and land sequence (Fig. 9, element 43 and Fig. 20, MARKs) is disposed near the address area. The grooves are disposed near the address area because they run between the tracks on which the address areas are disposed. The marks shown in Fig. 9 and Fig. 20 are interpreted as pits and the areas between the marks are interpreted as lands. The pit and land sequence is disposed near the address area as shown in Fig. 5, the data area immediately follows the address area.

In regard to claim 3, Sugiyama discloses that the second recording layer is also optically recordable (Col. 20, line 32 and Col. 24, line 67); a groove is disposed near the address area in the first data recording layer (Fig. 20, element 39); and a pit and land sequence is disposed near an address area in the second data recording layer (Fig. 9, element 43 and Fig. 20, MARKs). The grooves and pit and land sequence of the

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respective layers are disposed near the respective address areas in the same way as in claim 2.

In regard to claim 4, Sugiyama discloses that a groove (Fig. 20, element 39) or a pit and land sequence (Fig. 20, MARKs) is disposed in an area adjacent in the radial direction to the address area (Fig. 5C and Fig. 20). The grooves are disposed in an area adjacent in the radial direction to the address area because they run adjacent to the track on which the address area is disposed. The pit and land sequence of an adjacent track also is disposed in an area adjacent in the radial direction to the address area.

In regard to claim 5, Sugiyama discloses that a groove or a pit and land sequence is disposed in an area adjacent in the circumferential direction to the address area (Fig. 5C and Fig. 20). The pit and land sequence of the data area is disposed in an area adjacent in the circumferential direction to the address area.

8. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al (hereafter Maeda) (US 6,072,759).

Maeda discloses an optical data recording method for recording data to a first data recording layer of an optical disc having at least first (Fig. 1B, element L1) and second (Fig. 1B, element L2) data recording layers with at least the first data recording layer being optically recordable, said method comprising: recording dummy data to a specific area (Fig. 7, RESERVE Col. 8, lines 26-27) other than a data recording area (Fig. 7, DATA AREA).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al (hereafter Murakami) (US 4,512,006) in view of Yokogawa et al (hereafter Yokogawa) (US 5,608,715).

Murakami discloses an optical disc (Fig. 4, element 10) comprising a first data recording layer with at least the first data recording layer being optically recordable (Col. 3, lines 41-42), wherein: the first data recording layer comprises a data area (Fig. 5, element S3) and an address area (Fig. 5, element 70-1) for identifying a location in the data area, the address areas contain a pit and land sequence, and are randomly disposed (Col. 6, lines 64-66). Murakami does not disclose that the optical disc has at least first and second data recording layers.

Yokogawa teaches that recording density of an optical disc increases as the number of data recording layers of the optical disc increases (Col. 5, lines 9-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the optical disc of Murakami have at least first and second data recording layers as suggested by Yokogawa, the motivation being to increase recording density of the optical disc.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka et al (hereafter Nagasaka) in view of Yokogawa.

Nagasaka discloses an optical disc comprising a first data recording layer with at least the first data recording layer being optically recordable, wherein: the first data recording layer comprises a data area (Fig. 1, RECORDING AREA and Fig. 5, element

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501 not including elements 500) and address areas (Fig. 1, element HEADER AREA and Fig. 5, element 500) for identifying a location in the data area, the address areas contain a pit and land sequence (Fig. 1, elements 102-104), and are disposed offset a substantially constant disc center angle q (angle to the disc center) at each increment of a constant distance radially to the disc (Fig. 5). The width of a band (Fig. 5, element 500) is interpreted as the increment of a constant distance radially to the disc. Nagasaka does not disclose that the optical disc has at least first and second data recording layers.

Yokogawa teaches that recording density of an optical disc increases as the number of data recording layers of the optical disc increases (Col. 5, lines 9-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the optical disc of Nagasaka have at least first and second data recording layers as suggested by Yokogawa, the motivation being to increase recording density of the optical disc.

11. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine (US 5,966,358) in view of Yokogawa.

In regard to claim 9, Mine discloses an optical data recording method for recording data to a first data recording layer of an optical disc with at least the first data recording layer being optically recordable, said method comprising: determining for specific area units whether recording is possible; and recording dummy data to an area determined to be unrecordable (Col. 6, lines 48-53). Mine does not disclose that the optical disc has at least first and second data recording layers.

Yokogawa teaches that recording density of an optical disc increases as the number of data recording layers of the optical disc increases (Col. 5, lines 9-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the optical disc of Mine have at least first and second data recording layers as suggested by Yokogawa, the motivation being to increase recording density of the optical disc.

In regard to claim 10, Mine discloses that a specific area unit is determined to be unrecordable when reading address data assigned to said area does not meet specific reading conditions (Col. 6, lines 48-53).

12. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (hereafter Fukushima) (US 5,138,599) in view of Yokogawa.

In regard to claim 11, Fukushima discloses an optical data recording method for recording data to a first data recording layer of an optical disc with at least the first data recording layer being optically recordable, said method comprising: recording dummy data to a specific area (Figs. 1 and 3, DUMMY TRACK AREA) other than a data recording area (Figs. 1 and 3, ZONE (i) and (i+1)). Fukushima does not disclose that the optical disc has at least first and second data recording layers.

Yokogawa teaches that recording density of an optical disc increases as the number of data recording layers of the optical disc increases (Col. 5, lines 9-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the optical disc of Fukushima have at least first and second data recording layers as suggested by Yokogawa, the motivation being to increase recording density of the optical disc.

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In regard to claim 12, Fukushima discloses that the data recording layer is segmented in the radial direction into multiple zones, and the specific dummy data recording area is an area at a boundary between adjacent zones (Figs. 1 and 3).

13. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai (US 5,210,734) in view of Yokogawa.

In regard to claim 11, Sakurai discloses an optical data recording method for recording data to a first data recording layer of an optical disc with at least the first data recording layer being optically recordable, said method comprising: recording dummy data to a specific area (Fig. 1, element 105) other than a data recording area (Col. 6, lines 30-35). Sakurai does not disclose that the optical disc has at least first and second data recording layers.

Yokogawa teaches that recording density of an optical disc increases as the number of data recording layers of the optical disc increases (Col. 5, lines 9-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the optical disc of Sakurai have at least first and second data recording layers as suggested by Yokogawa, the motivation being to increase recording density of the optical disc.

In regard to claim 13, Sakurai discloses that the specific dummy data recording area is an area for recording disc management information (Fig. 1, element 100 and Col. 6, lines 30-35).

Citation of Relevant Prior Art

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14. Satoh et al (US 5,303,225) discloses an optical disc having first and second data recording layers, wherein the first data recording layer has a data area and an address area (Figs. 3-5). Maeda (US 6,272,085) discloses a method that writes dummy data in sectors determined to be defective to continuously carry out the write operation (Col. 14).

Allowable Subject Matter

15. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record alone or in combination disclose or suggest an optical disc comprising at least first and second data recording layers with at least the first data recording layer being optically recordable, wherein: the first data recording layer comprises a data area and an address area for identifying a location in the data area, the address area contains a pit and land sequence, and a groove or a pit and land sequence is disposed near the address area, wherein a groove or a pit and land sequence is disposed in an area adjacent in the circumferential direction to the address area, wherein **groove or a pit and land sequence width decreases as distance from the address area increases.**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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9/2/04